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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,049	03/31/2004	Yew Wcc Cheong	111079-136357	5732

31817 7590 01/11/2007  
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PORTLAND, OR 97204

EXAMINER
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SHAKERI, HADI

ART UNIT	PAPER NUMBER
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3723

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/11/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/814,049	<b>Applicant(s)</b> CHEONG, YEW WEE	
	<b>Examiner</b> Hadi Shakeri	<b>Art Unit</b> 3723	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-10, 13-20 and 22-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10, 13-20 and 22-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                      |                                                                   |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____.                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____.                                                          | 6) <input type="checkbox"/> Other: ____.                          |

**DETAILED ACTION*****Claim Objections***

1. Claims 2 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 2, instead of adding another step or limitation to the parent, only further describes in a narrative form a function of the gel, i.e., allowing it to hold the wafer.

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

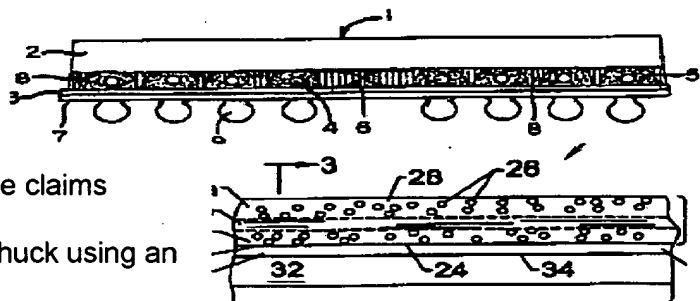
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 6, 8-10, 13-19, 22, and 24-27 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of either Watson (6,784,555) or Kuhl et al. (6,056,846).

AAPA, e.g., Figs. 1-3 and pages

2-4, meets all of the limitations of the above claims including attaching a semiconductor to a chuck using an adhesive and grinding the backside, except for

disclosing the use of adhesive gel comprising particles. Adhesive used in the art have particles embedded in them for various reasons, e.g., strength, providing uniform gap or spacers. It

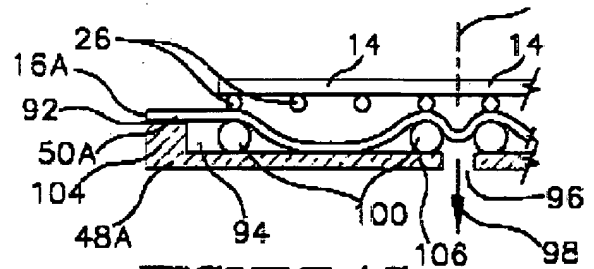


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would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the invention of AAPA with the use adhesive as taught by either Watson or Kuhl et al. to enhance the operation, e.g., by using uniform spacers preventing localized stress.

4. Claims 1-6, 8-10, 13-20, 22, and 24-27 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA) in view of Farnworth et al. (6,136,137) and Watson.

AAPA, e.g., Figs. 1-3 and pages 2-4, meets all of the limitations of the above claims, except for disclosing the use of adhesive gel. Farnworth et al.



teaches system and methods for dicing wafers in which pressure sensitive adhesive tapes, or silicone gels (04:44) are used and wherein the workpiece is released from the chuck by applying vacuum pressure. Watson discloses (columns 1 and 2) adhesives having spacers or fillers to provide a uniform gap. It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the invention of AAPA with the use of silicone gel with spacers as taught by Farnworth and Watson to adapt the system for providing adhesion that permits ease of separation.

5. Claims 7 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prior Art (AAPA as modified by Watson or Kuhl or AAPA as modified by Farnworth and Watson) as applied to claims 1 and 16 above, and further in view of Kataoka et al. (6,273,791).

Prior art as applied above meets all of the limitations, except for disclosing washing the wafer. Kataoka et al. discloses that typically in the producing IC semiconductors, wafers go through a step of washing. It would have been obvious to one of ordinary skill in the art, at the

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time the invention was made, to further modify the prior art invention with the step of washing to preparer the wafer for the next stage of production in view of Kataoka et al.

### ***Response to Arguments***

6. Applicant's arguments filed November 11, 2006 have been fully considered but they are moot in view of the new rejections.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

It is noted that claims 1-6, 8-20, 22, and 24-27 are rejected over AAPA in view of Watson and Kuhl et al., as the argument may suggest, rather in view of either Watson or Kuhl et al. The argument that neither Watson or Kuhl et al. teaches preventing the membrane from collapsing when a vacuum suction is applied is not persuasive, since the independent claims do not recite for a positive steps of applying suction (e.g., like claim 5), it is only narrative, and modified prior art, (AAPA in view of Watson or AAPA in view of Kuhl et al.) is capable of meeting the function. With regards to claims 5 and 20, the argument is persuasive thus the rejections are withdrawn.

Regarding the rejection over AAPA/Farnsworth/Watson, Applicant argues that Farnsworth does not suggest gel material with particles. Applicant argues against the references individually rather than the combination. Applicant does not provide any arguments against the rejection over AAPA as modified by Farnsworth and Watson. AAPA in view of Farnsworth teaches all the steps as recited, e.g., applying a vacuum suction to separate the workpiece through rods instead of providing a gel material having particles, modifications considered obvious to one of ordinary skill in the art in view of Watson.


The arguments against claims 7 and 23 are not persuasive for the reasons given above.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hadi Shakeri whose telephone number is (571) 272-4495. The examiner can normally be reached on Monday-Friday.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Hadi Shakeri  
Primary Examiner  
Art Unit 3723

January 8, 2007